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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,776	06/29/2001	Wolfgang Horn	00 P 14945 US	8889
7470	7590	11/09/2005	EXAMINER PHAM, THOMAS K	
WHITE & CASE LLP PATENT DEPARTMENT 1155 AVENUE OF THE AMERICAS NEW YORK, NY 10036			ART UNIT 2121	PAPER NUMBER

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/896,776

Applicant(s)

HORN ET AL.

Examiner

Thomas K. Pham

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Response to Amendment***

1. This action is in response to request for re-consideration filed on 2/14/2005.
2. Applicant's arguments with respect to claims 16-32 have been considered but they are not persuasive.

**Quotations of U.S. Code Title 35**

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### **Claim Rejections - 35 USC § 102**

7. Claims 16-19, 21-23 and 25-26, 30 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent no. 5,611,059 ("Benton").

#### **Regarding claim 16**

Benton teaches an industrial controller comprising a plurality of devices, for use in controlling a system including a plurality of components (col. 1 lines 13-25), the controller comprising:

- control means independent of the controlled components (col. 3 lines 49-52) and
- component control means relating to the controlled components for supplementing the control means (col. 7 lines 13-17), the component control means implemented using a plurality of technology objects corresponding to the components, the technology objects distributable on the devices (col. 9 lines 29-54). Examiner interprets that the graphical symbols are similar to applicant's technology objects since they are also represent the physical devices of the real world.

#### **Regarding claim 17**

Benton teaches automatically generated communications links between at least two of the technology objects (col. 3 lines 55-60)

#### **Regarding claim 18**

Benton teaches technology objects comprise attributes taken into account in the generation of the communications links (col. 9 lines 22-28).

#### **Regarding claim 19**

Benton teaches technology objects are distributable on a plurality of devices within a project, the project relating to plurality of control units (col. 5 line 66 to col. 6 line 18).

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**Regarding claim 20**

Benton teaches the functionality of the technology objects is distributed among control units in equidistant communication with one another in real time with clock synchronization (col. 10 lines 53-58).

**Regarding claim 21**

Benton teaches the technology object types permit technological scaling of the functionality of the controller (col. 7 lines 35-39).

**Regarding claim 22**

Benton teaches technology objects are interleaved to form container objects (col. 6 lines 55-65).

**Regarding claim 23**

Benton teaches further adapted to provide a plurality of views of the technology objects to a user (col. 4 lines 32-41).

**Regarding claim 24**

Benton teaches further adapted for feedback-free programming of a technology object with respect to the other technology objects and the control means (FIG. 6 the programs interface with physical device with no feedback).

**Regarding claim 25**

Benton teaches technology objects are represented in the engineering system by graphical elements (col. 4 lines 32-41).

**Regarding claim 26**

Benton teaches the technology objects have types and the technology object types are clustered into one or more technology packages (col. 4 lines 47-59).

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**Regarding claim 27**

Benton teaches a method of programming an industrial control system comprising a plurality of devices, the controller being programmed for one or more projects and comprising a plurality of technology objects (col. 1 lines 13-25), the method comprising the steps of:

- providing a technology-neutral control system (col. 3 lines 42-52, “The present invention allows ... with the physical device”);
- interleaving of the technology objects to form a set of complex technology objects (col. 6 lines 55-65, “Physical devices with more ... is well known in the art”);
- distributing a plurality of the technology objects on a plurality of the devices (col. 6 lines 30-35, “Alternatively, the physical devices ... and the physical devices 20, 30”);
- reusing at least one of the complex technology objects in a second project (col. 7 line 60 to col. 8 line 5, “The process graphic editor 52 ... partially modified and deleted”). It is inherent that the template library and the graphic display files can be reused and modified as needed.

**Regarding claim 28**

Benton teaches communications channel between at least two of the technology objects, wherein attributes of the technology objects are taken into account in generating the communication channels (col. 9 lines 22-28).

**Regarding claim 29**

Benton teaches a method of programming an industrial control system comprising a plurality of devices, the controller being programmed for one or more projects and comprising a plurality of technology objects (col. 1 lines 13-25), the method comprising the steps of:

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- providing a technology-neutral control system (col. 3 lines 42-52, “The present invention allows ... with the physical device”);
- instantiating the technology objects (col. 3 lines 55-60, “In addition, when graphical symbols ... linked to the graphical symbol”);
- interleaving the technology objects to form a set of complex technology objects for a first project (col. 6 lines 55-65, “Physical devices with more ... is well known in the art”);
- distributing the technology objects on a plurality of the devices (col. 6 lines 30-35, “Alternatively, the physical devices ... and the physical devices 20, 30”);
- generating communication channels between the technology objects (col. 4 lines 60-64, “Furthermore, the present invention ... within the application database”);
- reusing at least one of the complex technology objects in a second project (col. 7 line 60 to col. 8 line 5, “The process graphic editor 52 ... partially modified and deleted”). It is inherent that the template library and the graphic display files can be reused and modified as needed.

#### **Regarding claim 30**

Benton teaches a method for programming an industrial controller for a technical process, the method comprising the steps of:

- selecting a plurality of technology objects relevant to a desired application (col. 4 lines 32-41, “the system also includes ... available to the pointgroup”);
- interleaving the selected technology objects to form technology objects having complex functionality (col. 6 lines 55-65, “Physical devices with more ... is well known in the art”); and

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- distributing the interleaved technology objects onto a plurality of devices (col. 6 lines 30-35, FIG. 6 and col. 11 lines 21-31).

#### **Regarding claim 31**

Benton teaches interleaved software objects may be re-used in a subsequent application (col. 7 line 60 to col. 8 line 5, “The process graphic editor 52 ... partially modified and deleted”). It is inherent that the template library and the graphic display files can be reused and modified as needed.

#### **Regarding claim 32**

Benton teaches a system for programming an industrial controller, comprising:

- an industrial control system (col. 1 lines 13-25);
- means for selecting a plurality of technology objects relevant to a desired application (col. 4 lines 32-41, “the system also includes ... available to the pointgroup”);
- means for interleaving the selected technology objects to form technology objects having complex functionality (col. 6 lines 55-65, “Physical devices with more ... is well known in the art”); and
- means for distributing the interleaved technology objects onto a plurality of devices (col. 6 lines 30-35, “Alternatively, the physical devices ... and the physical devices 20, 30”).

#### ***Response to Arguments***

In the remark the applicants argue that cited prior art failed to teach:

- I) “distribution of technology objects on a plurality of industrial control devices” as recited in claims 16, 27, 29, 30 and 32 .



In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the commands that in part character technology objects and determine their basic behavior" and "objects that not only represent controlled physical devices but that include the capability to execute commands that control such devices") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, the term "technology objects" includes multiple definitions, functionalities and variations throughout the specification in which many of these features are not in the claims. Accordingly, examiner can interpret the claims with only one of the multiple definitions and/or variations stated in the application.

I) Prior art Benton (USPN 5,611,059) teaches in column 9 lines 29-54 and column 10 lines 34-40 as follow:

The graphical symbol library 120 is the location within the system database 100, and comprises a premade set of graphical symbols 122 of displayable representations usually of what the actual physical devices 40 look like in the control structure. A user can select graphical symbols 122 from the graphical symbol library 122 in order to create or modify graphic display files 134. Graphical symbols 122 which are representations of multi-parameter physical devices 30 have premade sets of logical parameters 124 associated with these types of graphical symbols 122. When the user 80 wants to create or modify a graphic file 134, the user instructs the process graphic editor 52 to open a new graphic file 134 or open an existing graphic file 134 which is stored within the graphic display file 132. If a user wants to create a graphical symbol 122 within the graphic file 134, the user 80 instructs the process graphic editor 52 to select a graphic symbol 122 from the graphical symbol library 120 and place it into the graphic file 134. When a user 80 creates a graphical symbol 122 of a multi-parameter physical device 30, the premade set of logical parameters 124 associated with the symbol 122 also now exist within the graphic file 134, and are associated to the symbol 122 within the graphical file 134. The user is not finished, however, because the symbol 122 and its logical parameters 124 have to be linked to the points 136 which represent the physical devices 40, and physical parameters 38 within the control structure.

It should be understood that the symbols 122 can be created from scratch through the process graphic editor 52 in conjunction with drawing utilities (not shown). These symbols 122, as well as the premade set of symbols 122 in the graphical symbol library 120 can also be modified and deleted according to the requirements of the specific application of the control structure.

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As described above, the Benton reference uses graphical symbols 122 (technology objects) to represent a plurality of physical devices 30 in the real world. These graphical symbols 122 provide a defined sets of logical parameters 124 that represents physical parameters of the physical devices 30 for use to execute or control the physical devices 30. Furthermore, since the graphical symbols 122 are kept in a graphical symbol library 120, they can be re-used, deleted or modified as required by the control structure.

Applicants disclose the term “technology object” as an object that provides a defined, closed technological functionality which represents a component of the real world. Furthermore, the “technology object” can be easily be reused by the user as described in paragraph 10 of the original specification as follow:

(0010) A technology object preferably represents a component of the real world. In the context of industrial controllers, these may be, for example, components of machine tools or production machines. Technology objects provide a defined, closed technological functionality. They may be interleaved with one another to implement technological tasks. Because the technological functionality of the controller is formed by technology objects, which are preferably real components, the technological capability (i.e., the power of the controller) becomes immediately transparent to a user of the controller. A technology object can also very easily be reused by the user as a software technological unit in different applications and controllers. In using technology objects, a user can abstract objects from their implementation. Technology objects that are directly usable by the user in his user program are formed by their instantiation from technology object types. Any desired number of instances (tailored to the user) of technology objects can be obtained from a technology object type once it has been defined. Because the instantiation can take place in the engineering system or in the run time system, it is readily convenient and easy for the user to use the technology objects in his applications. The functional depth of a controller can, thus, be expanded very easily. This expandability is limited only by hardware restrictions (e.g., CPU, power or memory restrictions).

Thus, the graphical symbols of Benton as described above are very much similar to the “technology objects” of the instant application. Therefore, the limitations are met by the reference.

*Conclusion*

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday to Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

**Thomas Pham**

*Patent Examiner*



November 3, 2005



**Anthony Knight**  
Supervisory Patent Examiner  
Group 3600